REMARKS/ARGUMENTS

In response to the Office Action of March 11, 2003, Applicants request re-examination and reconsideration of this application for patent pursuant to 35 U.S.C. 132.

Claims 2-35 have been cancelled. Claims 36-43 have been added. Claims 1 and 36-43 are pending in the instant application.

The above additions to the claims find basis in the original disclosure at page 12, lines 2-12; page 16, line 2 to page 18, line 10 and page 27, line 17 to page 28, line 2. The method of claims 36 and 39 is described in detail at pages 20-27. Page 28, lines 3-23 refers to the use of various types of samples and their measurement. Page 28, line 15 to page 29, line 7 refers to immunoassay techniques which are well known in the art and provides a citation for an article by Takahashi which is incorporated into the instant specification by reference at page 33, lines 3-8. The Takahashi article describes the standard use of obtaining more than one sample and at different time periods. Page 29, line 8 to page 31, line 5 describes the use of monoclonal antibodies and their production. Page 31, lines 6-8 refer to the use of polyclonal antibodies produced in an animal host. It is clear from these specific recitations and from the description of methods utilized that the methods and types of kits were fully contemplated by the inventors at the time of filing and were enabled by virtue of the disclosure as originally filed.

Information Disclosure Statement

The Examiner did not consider reference WO 01/05422 (submitted in the French language) which was cited on the Supplemental Information Disclosure Statement filed December 9, 2002 because an English language translation was not provided for this document. Applicants are in the process of having an English translation of this document prepared and will forward the translation to the Examiner at a later date.

Sequence Compliance

The Examiner alleges that the instant specification fails to comply with the requirements of 37 CFR 1.821 through 1.825 because the specification contains amino acid sequences (having sequence lengths that are greater than or equal to 4 amino acid residues) that are not identified with a SEQ ID NO. Applicants have now reviewed the entire specification including the figures and the claims for sequence disclosures. The only sequence found to be disclosed is the amino acid sequence identified as SEQ ID NO:1. Applicants provided a Sequence Listing (in both paper and computer readable form) disclosing SEQ ID NO:1 on April 19, 2002. However, Applicants now recognize that the figures were not updated to include sequence identifiers at the time of filing of the original Sequence Listing. Applicants herein amend the specification to add sequence identifiers to the sequences disclosed in the figures.

Additionally, Applicants noted that amino acid residues 1 and 13 of SEQ ID NO:1 (see sequences shown in the figures) were not included in the originally filed Sequence Listing. Applicants herein provide a diskette containing a substitute Sequence Listing in electronic computer readable form to replace the previously submitted copy (filed on April 19, 2002). The diskette submitted herewith contains a Sequence Listing which adds amino acid residues 1 and 13 to SEQ ID NO:1. When carrying out mass spectrometric procedures, it is possible to fragment a whole molecule, depending upon the enzyme used for digestion. A sequence is often predicted from these fragments but often the sequence is not identified completely. It is conventional in the art to show the missing portions of the predicted sequence in parentheses. The first and last amino acid residues of SEQ ID NO:1 are predicted residues as indicated by the parentheses in Figure 1. The peptide sequence without predicted amino acid residues 1 and 13 was shown in the original specification at page 27, line 18 and is shown in Figures 1 and 2 with predicted amino acid residues 1 and 13. Thus, no new matter is added, the substitute Sequence Listing is for the purpose of clarification only. Applicants also herein provide a substitute paper copy of the Sequence Listing as contained on the diskette filed herewith. The computer readable form of the substitute Sequence Listing is identical to the paper copy of the substitute Sequence Listing. Thus, it is respectfully submitted that the

instant application is now in compliance with all of the sequence rules according to 37 CFR 1.821 through 1.825.

Objection to the Claims

Claim 2, as originally presented, stands objected to under 37 CFR 1.75(c) as being of improper dependent form for failing to further limit the subject matter of the previous claim. The Examiner alleges that claim 2 is not further limiting from claim 1 due to a lack of disclosure as to what difference in biomarker embodiments are included in claim 1 versus claim 2.

Claim 1 is amended herein to recite a specific biopolymer marker peptide (amino acid residues 2-12 of SEQ ID NO:1) diagnostic for myocardial infarction (MI), intracerebral hemorrhage (ICH) or congestive heart failure (CHF) and claim 2 is herein canceled. Thus, the grounds for the objection are obviated. Applicants respectfully request that the objection now be withdrawn.

Rejections under 35 USC 112 (second paragraph)

Claims 1 and 2, as originally presented stand rejected under 35 U.S.C. 112, second paragraph, as being indefinite for allegedly failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The Examiner alleges that the phrase recited in claim 1 "useful in indicating at least one particular disease state" causes

the claim to be vague and indefinite. The Examiner further alleges that it is unclear what criteria are being used to indicate occurrence of a particular disease state; for example, is it indicative of a disease state if a specific marker is absent or present?

Claim 2 has been canceled and claim 1 has been amended to remove the phrase "useful in indicating at least one particular disease state". It is clear with observation of Figure 1 that the presence of the specific peptide marker (SEQ ID NO:1) is indicative of the disease state (MI, ICH or CHF). The data of Figure 1 shows that patients having a history of MI, ICH or CHF show the presence of SEQ ID NO:1 in their serum. Accordingly, applicants have now clarified the metes and bounds of the claims (1 and 2) and respectfully request that this rejection now be withdrawn.

Additionally, the Examiner alleges that the phrase recited in claim 2 "disease state is from the group of myocardial infarction...or congestive heart failure" causes the claim to be vague and indefinite because the phrase renders the claim an improper Markush type claim. Claim 2 has been canceled, thus obviating this rejection. Applicants respectfully request that this rejection now be withdrawn.

Rejection under 35 USC 101

Claims 1 and 2, as originally presented stand rejected under

35 U.S.C. 101 because the claimed invention allegedly lacks patentable utility due to its not being supported by a specific, substantial, and credible utility or, in the alternative, a well-established utility.

Claim 2 has been canceled and claim 1 is amended.

The Examiner acknowledges at page 5 of the Office Action mailed March 11, 2003 that Applicants identified a specific marker which is evidentiary of at least one particular disease state, whereby the presence of said marker serves as a positive indicator of disease (pages 25-27 of the specification and Figures 1 and 2). However, the Examiner also states at page 6 of the Office Action mailed March 11, 2003 that the disclosure is not substantial because the specification lacks a description of negative controls in order to establish the specificity of the claimed biopolymer marker. At page 6 of the Office Action mailed on March 11, 2003, the Examiner questions how the marker can be used to indicate disease states without the disclosure necessary for distinguishing individuals inflicted with a specific disease state versus individuals not inflicted with the said disease.

In response, Applicants herein provide the attached Declaration (and Figure) under 37 CFR 1.132. The figure attached to the declaration provides side-by-side profiles (obtained using techniques of mass spectrometry) of normal human sera versus sera from patients having myocardial infarction (MI). This profile

comparison clearly evidences the absence of the 1348 dalton marker in normal human sera and thus establishes the specificity of the 1348 dalton peptide as a marker which when present in the sera is diagnostic for myocardial infarction (MI). Thus, Applicants have clarified the specific, substantial and credible utility of the claimed invention and respectfully request that this rejection now be withdrawn.

Rejection under 35 USC 112 (first paragraph)

Claims 1 and 2, as originally presented stand rejected under 35 U.S.C. 112, first paragraph, as allegedly containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or which with it is most nearly connected, to make and/or use the invention.

Claim 2 has been canceled and claim 1 is amended.

The Examiner alleges on page 7 of the Office Action mailed on March 11, 2003, that since claims 1 and 2 are not supported by a substantial utility, one skilled in the art would not know how to use the claimed invention without undue experimentation.

As clarified in the above discussion (Rejection Under 35 USC 101), the claimed invention is supported by a substantial utility. The 1348 dalton peptide is specifically used as a marker which when present in the sera is diagnostic for myocardial infarction (MI), intracerebral hemorrhage (ICH) or congestive heart failure (CHF).

In light of this substantial utility, Applicants assert that one of ordinary skill in the art when reviewing the instant specification and declaration filed herewith would recognize how to use the claimed peptide as a marker for myocardial infarction (MI), intracerebral hemorrhage (ICH) or congestive heart failure (CHF). Thus, Applicants respectfully request that this rejection now be withdrawn.

Rejection under 35 USC 102(b)

Claims 1 and 2, as originally presented stand rejected under 35 U.S.C. 102(b) as allegedly being clearly anticipated by Harrison *et al.* (US 5,849,297).

Harrison *et al.* teach modified human C3 complement proteins which are capable of forming stable C3 convertases. These modified human C3 complement proteins function to deplete levels of complement pathway proteins and are thus useful as therapeutic agents. Amino acid residues 1309-1319 of SEQ ID NO:1 disclosed in Harrison *et al.* are identical to amino acid residues 2-12 of SEQ ID NO:1 of the instant application. SEQ ID NO:1 disclosed in Harrison *et al.* represents 1663 amino acid residues of human C3 complement protein.

Claim 2 has been canceled. Claim 1 of the instant application has been amended to recite a "biopolymer marker peptide consisting of amino acid residues 2-12 of SEQ ID NO:1 diagnostic for

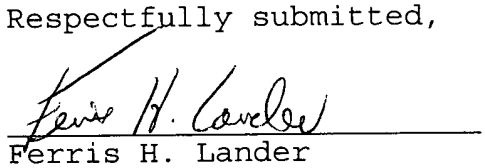
myocardial infarction (MI), intracerebral hemorrhage (ICH) or congestive heart failure (CHF)". This claim identifies a specific peptide (amino acid residues 2-12 of SEQ ID NO:1) with a specific function (diagnostic for myocardial infarction (MI), intracerebral hemorrhage (ICH) or congestive heart failure (CHF)). Harrison *et al.* do not teach that SEQ ID NO:1 (1663 amino acid residues of human C3 complement protein) or any portion thereof is diagnostic for myocardial infarction (MI), intracerebral hemorrhage (ICH) or congestive heart failure (CHF).

Accordingly, Applicants respectfully submit that claim 1, as instantly presented, now distinguishes over the compositions taught by Harrison *et al.* and respectfully request that this rejection be withdrawn.

SUMMARY

In light of the foregoing remarks and amendments to the claims, it is respectfully submitted that the Examiner will now find the claims of the application allowable. Favorable reconsideration of the application is courteously requested.

Respectfully submitted,



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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of	:	Jackowski *et al.*
Serial No.	:	09/845,715
Filed	:	April 30, 2001
For	:	**Biopolymer Marker Indicative of Disease State Having A Molecular Weight of 1348 Daltons**
Examiner	:	Cheyne Dune Ly
Art Unit	:	1631
Our File No.	:	2132.030

CERTIFICATE UNDER 37 CFR 1.8(a)
I hereby certify that this correspondence is being deposited with the U.S. Postal Service as First Class mail in an envelope addressed to Commissioner for Patents P.O. Box 1450, Alexandria, VA 22313-1450 on 6-10-03

Susan Hess

To: Mail Stop: Non-Fee Amendment
Commissioner for Patents
P.O. Box 1450
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DECLARATION UNDER 37 CFR § 1.132

I, Ferris H. Lander, do hereby declare as follows:

1. I am a registered Patent Agent and am authorized to represent the inventor's and assignee in the application entitled **"Biopolymer Marker Indicative of Disease State Having A Molecular Weight of 1348 Daltons"**, having U.S. Application Serial No. 09/845,715, filed April 30, 2001.

2. In the Office Action mailed on March 11, 2003, claims 1 and 2 were rejected under 35 U.S.C. 101 because the claimed invention allegedly lacks patentable utility due to its not

being supported by a specific, substantial, and credible utility or, in the alternative, a well-established utility. The Examiner states at page 6 of the Office Action that the disclosure is not substantial because the specification lacks a description of negative controls in order to establish the specificity of the claimed biopolymer marker. At page 6 of the Office Action, the Examiner questions how the marker can be used to indicate disease states without the disclosure necessary for distinguishing individuals inflicted with a specific disease state versus individuals not inflicted with the specific disease.

3. In order to provide data which would obviate this rejection, I contacted Dr. George Jackowski, Chairman and Chief Science Officer of Syn-x Pharma Inc., and asked to be provided with evidence of the absence of the 1348 dalton marker in normal human sera.

4. This declaration (including the attached figure) is provided in order to show a comparison of the serum profile of individuals having myocardial infarction (MI) to the serum profile of non-diseased individuals, so as to evidence that the marker (the 1348 dalton peptide) was not present in normal human sera.

The attached figure, obtained from Dr. Jackowski, provides side-by-side profiles (obtained using techniques of mass spectrometry) of normal human sera versus sera from patients having myocardial infarction (MI). This profile comparison

clearly evidences the absence of the 1348 dalton marker in normal human sera.

The undersigned declares that all statements made herein of his own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the Application or any patent issuing thereon.

6-9-2003
Date

Ferris H. Lander
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